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GREAT WHALE IRON MINES DRILLING DEVELOPS

BILLION TONS OF MAGNETITE ORE

Three major magnetite iron deposits of Great Whale Iron Mines combined contain an estimated 942 million long tons of concentrating ore, which is recoverable by open pit mining methods and capable of yielding 383 million long tons of high-grade iron concentrate, it is revealed in a comprehensive 50-page report by Lloyd M. Scofield, consulting mining geologist. Known, but unestimated, iron formation will, when developed by drilling, increase these tonnage figures notably, stated Mr. Scofield.

The report covers three years of extensive exploratory and laboratory work, including mapping, diamond drilling and ore testing, undertaken at an expenditure of over \$750,000.

Owned equally by Belcher Mining Corporation, Wright-Hargreaves Mines and Malartic Gold Fields, all interests of Little Long Lac Gold Mines, Great Whale Iron Mines has been financed without public participation.

The Great Whale deposits are located on three concessions, embracing a total of 194.9 square miles, about 50 miles southeast of Great Whale River on the east side of Hudson Bay, New Quebec. Weather conditions are favorable for year-round mining operations, and resources for development of hydro-electric power conveniently located.

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$\frac{1}{2} \left(\frac{1}{2} + \frac{1}{2} \right) = \frac{1}{2}$

Figure 1. Schematic diagram of the experimental setup. The subject is seated in a chair and views the target through a video camera. The target is a light source that is controlled by a computer. The subject's hand is positioned on a horizontal surface. The distance between the hand and the target is 10 cm. The target is a light source that is controlled by a computer. The subject's hand is positioned on a horizontal surface. The distance between the hand and the target is 10 cm.

The magnitude of these deposits, states Walter Maybank, Manager of Great Whale operation, would support large-scale mining operations for generations. Markets for iron ore govern the scale of operations and these are sought in North America and Europe.

There are three potential transportation routes all of which are considered feasible for servicing these important iron ore markets. European and American ports can be reached via Hudson Strait which connects to the shipping lanes of the Atlantic Ocean. Construction of ocean-going facilities at Moosonee on the southern tip of James Bay, now being considered by the Government of Ontario, would provide a direct route for the company's iron ore to the giant Great Lakes industrial area. Mr. Scofield, in his report, suggests a third route, one which would involve the construction of a railroad from the Great Whale iron deposits through the heart of Quebec to Chibougamau or Gagnon.

"It is suggested", he said. "that consideration might be given to the possibility of an all-rail haul to some port on the St. Lawrence River.... A connection with the Canadian National at Chibougamau or with the Cartier railway at Gagnon would afford the shortest additional rail haul to tidewater. The per ton amortization rate for such a rail connection would be low because of the large reserve existing at Great Whale".

To date at Great Whale, 58 holes have been drilled on the "A" orebody for a total of 35,924 feet; 17 holes drilled on the "D" orebody for 10,224 feet and 17 holes drilled on the "E" orebody for a total of 10,110 feet. Split cores from this extensive drilling, together with a 28-ton bulk sample from the "A" deposit and miscellaneous grab samples, have been subjected to months of exhaustive laboratory work, consisting of grinding, regrinding and separation tests, chemical analysis and spectographic analysis. On the basis of this work and open pit designs, Mr. Scofield estimates that the "A" orebody contains 529,640,000 long tons of crude ore from which are recoverable 219,756,000 long tons of concentrate, averaging 66.6 percent iron and 6.6 percent silica; the "D" orebody contains 146,153,000 long tons of crude ore capable of producing 65,864,000 long tons of concentrate, averaging 68.2 percent iron and 3.5 percent silica, and the "E" orebody contains 266,121,000 long tons capable of producing 97,263,000 long tons of concentrate, averaging 67.5 percent iron and 4.4 percent silica. This gives a total for the three deposits of 941,914,000 long tons of crude ore from which are recoverable 382,883,000 long tons of concentrate, averaging 67.1 percent iron and 5.5 percent silica.

Mr. Scofield points out that the "D" orebody, although the smallest of the three, yields the best grade of concentrate with the highest recovery and the "E" orebody requires a coarser grind than the other two deposits.

In addition to further tonnages which can be developed by more diamond drilling, such as at two areas of iron formation east of the central dike at the "D" orebody, increases in the estimated tonnages, Mr. Scofield reports, could be made at all of the orebodies by widening the open pits.

The Great Whale iron formation, he continues, occurs on high ground where it is readily accessible with minimum bank stripping and the overburden is very thin. The grinding size for the liberation of the magnetite is moderate at the "D" and "E" orebodies, and, while somewhat finer at the "A" orebody, the overall average requires only an 85 percent plus 200 mesh grind to produce an average grade of 67.1 percent iron, carrying 5.5 percent silica. This is done, it is noted, on a concentration ratio of 2.23 to 1 on all ore milled.

Ample supplies of mill water are at hand on the property and at least 100,000 kilowatts of potential hydro-electric power can be developed within a 21-mile radius of the deposits. The climate of Great Whale is comparable to that of the well-known mining camps of northwestern Ontario. The area is well timbered and there is no perma frost.

Plans for next season, states Mr. Maybank, include mapping and investigation of other interesting areas. Construction is to start soon of an airstrip on a sand plain, which lends itself ideally for two airstrips up to 10,000 feet in length. Upon completion

of the airstrip, an access road will be put in to handle traffic from the airport to the three orebodies.

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